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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,338	11/04/1999	JAMES V. LUCIANI	2204/149	3834

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EXAMINER	
LAFORGIA, CHRISTIAN A	
ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/434,338	LUCIANI ET AL.	
	Examiner	Art Unit	
	Christian La Forgia	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on 18 May 2005, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

2. To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

3. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. As per claim 60, merely claimed as a carrier wave representing an intangible signal *per se*, that is, a series of different voltages and that is, descriptive material *per se*, non-functional descriptive material, and is not statutory because it is not a physical "thing" nor a statutory process, as there are not "acts" being performed. Such claimed carrier waves do not define any structural and functional interrelationships between the carrier wave and other claimed aspects of the invention which permit the carrier wave's functionality to be realized. Since a carrier wave is merely a set of voltages being executed by a computer, the carrier wave itself is not a process, without a medium or transmission line needed to realize the carrier wave's functionality. In

contrast, a claimed carrier wave on a carrier wave medium encoded with a carrier wave defines structural and functional interrelationships between the carrier wave and the medium which permit the carrier wave's functionality to be realized, and is thus statutory. **Warmerdam**, 33 F.3d at 1361, 31 USPQ2d at 1760. **In re Sarkar**, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). See MPEP § 2106(IV)(B)(1)(a).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-60 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent 6,614,791 to Luciani et al., hereinafter Luciani, in view of U.S. Patent No. 6,693,878 to Daruwalla et al., hereinafter Daruwalla.

7. The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome

by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2). For applications filed prior to November 29, 1999, the subject matter that is disqualified as prior art under 35 U.S.C. 103(c) is strictly limited to subject matter that A) qualifies as prior art only under 35 U.S.C. 102(f) or 35 U.S.C. 102(g), and B) was commonly owned with the claimed invention at the time the invention was made. If the subject matter that qualifies as prior art only under 35 U.S.C. 102(f) or 35 U.S.C. 102(g) was not commonly owned at the time of the invention, the subject matter is not disqualified as prior art under 35 U.S.C. 103(c). See *OddzOn Products, Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1403-04, 43 USPQ2d 1641, 1646 (Fed. Cir. 1997).

8. As per claims 1 and 53, Luciani teaches a method for supporting virtual private networks in a label switched communication system having an ingress device in communication with an egress device via a number of intermediate devices, the method comprising:

a virtual private network identifier in Next Hop Resolution Protocol messages, the virtual private network identifier identifying a virtual private network (column 2, line 65 to column 3, line 5, i.e. "a Virtual Private Network Identifier in each NHRP control message and in each packet");

using the Next Hop Resolution Protocol messages to dynamically establish a path for the virtual private network (column 5, lines 11-55).

9. Luciani teaches using NHRP to establish a physical or logical (dynamic) path over a multi protocol over ATM network.

10. Luciani does not disclose using NHRP in a label switched network, wherein the NHRP messages include label information.

11. Daruwalla teaches using a multi protocol label switching protocol in a VPN network, complete with label information, to establish a label switched path (column 13, lines 31-54, column 14, lines 35-67). Both Luciani and Daruwalla deal with multi protocol protocols, that allow communication devices on different subnetworks to communicate without requiring routing at the internetwork protocol layer of the protocol stack.

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multi protocol label switching protocol in the system of Luciani, since Daruwalla states at column 2, lines 41-48 that multi protocol label switching is a standard manner of implementing VPN services in an IP network. By implementing multi protocol label switching in the system of Luciani such a modification would allow routing provisions for a VPN service to be implemented in an IP network.

13. Regarding claim 2, Luciani teaches the label information and the virtual private network identifier is included within a Next Hop Resolution Protocol message in a type-length-value field having at least a virtual private network identifier field for carrying the virtual private network identifier and a label information field for carrying the label information (column 3, lines 1-5).

14. Regarding claim 3, Luciani teaches the Next Hop Resolution Protocol messages to dynamically establish a label switched path for the virtual private network comprises using the Next Hop Resolution Protocol messages to dynamically establish a label switched path for a forward path from the ingress device to the egress device for the virtual private network (column 5, lines 11-54).

15. Regarding claims 4 and 54, Luciani discloses using the Next Hop Resolution Protocol messages to dynamically establish the label switched path for the forward path from the ingress device to the egress device for the virtual private network comprises sending a Next Hop Resolution Protocol request message by the ingress device; forwarding the Next Hop Resolution Protocol request message hop-by-hop from the ingress device to the egress device by each intermediate device that is on the forward path; sending a Next Hop Resolution Protocol reply message by the egress device; and forwarding the Next Hop Resolution Protocol reply message hop-by-hop from the egress device to the ingress device by each intermediate device that is on the forward path (column 5, lines 11-67).

16. Regarding claim 5, Luciani teaches the Next Hop Resolution Protocol request message is a Next Hop Resolution Protocol Resolution Request message (column 5, line 39).

17. Daruwalla discloses wherein the label information comprises a label request (column 13, lines 43-54, i.e. label information).

18. Concerning claim 6, Luciani teaches the Next Hop Resolution Protocol reply message is a Next Hop Resolution Protocol Resolution Reply message (column 5, line 48).

19. Daruwalla discloses wherein the label information comprises a label request (column 13, lines 43-54, i.e. label information).

20. Regarding claim 7, Luciani teaches the Next Hop Resolution Protocol reply message is a Next Hop Resolution Protocol Label Mapping message, and wherein the label information comprises label mapping information (column 12, lines 29-46, i.e. mapping each of the plurality of tags to a corresponding VPN identifier).

21. With regards to claim 8, Daruwalla teaches the Next Hop Resolution Protocol request message by an intermediate device comprises:

receiving the Next Hop Resolution Protocol request message from a previous hop device on the forward path (Figure 10, column 14, lines 35-41);

maintaining previous hop state information for the previous hop device (Figures 8, 10, column 14, lines 11-34); and,

forwarding the Next Hop Resolution Protocol request message to a next hop device on the forward path (Figure 10 [block 1014], column 14, lines 50-67).

22. Regarding claim 9, Luciani teaches forwarding the Next Hop Resolution Protocol reply message by an intermediate device comprises receiving a first Next Hop Resolution Protocol reply message from a next hop device on the forward path; allocating a forward path label for a label switched path segment from a previous hop device on the forward path to the intermediate device; and, sending a second Next Hop Resolution Protocol reply message including the forward path label and the virtual private network identifier to the previous hop device on the forward path based upon the previous hop state information (Figure 5, column 9, lines 11-39).

23. Regarding claim 10, Luciani teaches forwarding the Next Hop Resolution Protocol request message by an intermediate device comprises receiving the Next Hop Resolution Protocol request message from a previous hop device on the forward path, the Next Hop Resolution Protocol request message including a forward path address list; adding an intermediate device address to the forward path address list in the Next Hop Resolution Protocol request message; and, forwarding the Next Hop Resolution Protocol request message including the forward path address list to a next hop device on the forward path (Figure 5, column 9, lines 11-39).

24. Regarding claims 11, 26, and 43, Daruwalla teaches the forward path address list comprises a Next Hop Resolution Protocol Forward Transit NHS Record Extension field (Figure 8, column 14, lines 11-34).

25. Regarding claim 12, Luciani teaches forwarding the Next Hop Resolution Protocol reply message by an intermediate device comprises receiving a first Next Hop Resolution Protocol reply message from a next hop device on the forward path, the Next Hop Resolution Protocol reply message including a return path address list including at least an address of a previous hop device on the forward path; allocating a forward path label for a label switched path segment from a previous hop device on the forward path to the intermediate device; and, sending a second Next Hop Resolution Protocol reply message including the forward path label and the virtual private network identifier to the previous hop device on the forward path based upon the address in the return path address list (Figure 5, column 5, lines 11-54, column 9, lines 11-39).

26. With regards to claim 13, Luciani teaches sending a Next Hop Resolution Protocol reply message by the egress device receiving the Next Hop Resolution Protocol request message from a previous hop device on the forward path; allocating a forward path label for a label switched path segment from the previous hop device on the forward path to the egress device; and, sending the Next Hop Resolution Protocol reply message including the forward path label and the virtual private network identifier to the previous hop device on the forward path (Figure 5, column 9, lines 11-39).

27. Concerning claim 14, Daruwalla teaches the Next Hop Resolution Protocol request message includes a forward path address list including at least an address of the previous hop device on the forward path, and wherein sending the Next Hop Resolution Protocol reply message to the previous hop device on the forward path comprises sending the Next Hop Resolution Protocol reply message to the previous hop device on the forward path based upon the address in the forward path address list (Figure 10, column 14, lines 35-67).

28. With regards to claim 15, Luciani teaches the Next Hop Resolution Protocol messages to dynamically establish a label switched path for the virtual private network comprises using the Next Hop Resolution Protocol messages to dynamically establish a label switched path for a return path from the egress device to the ingress device for the virtual private network (column 5, lines 11-55, column 9, lines 11-39).

29. Concerning claim 16, Luciani teaches using the Next Hop Resolution Protocol messages to dynamically establish the label switched path for the return path from the egress device to the ingress device for the virtual private network comprises sending a Next Hop Resolution Protocol request message by the ingress device; and, forwarding the Next Hop Resolution Protocol request message hop-by-hop from the egress device to the ingress device by each intermediate device that is on the forward path (column 5, lines 11-55).

30. Regarding claim 17, Luciani teaches sending the Next Hop Resolution Protocol request message by the ingress device comprises allocating a return path label for a label switched path segment from a next hop device on the forward path to the ingress device; and, sending the Next Hop Resolution Protocol request message including the return path label and the virtual private network identifier to the next hop device on the forward path (column 5, lines 11-55, column 9, lines 11-39).

31. Concerning claim 18, Luciani teaches forwarding the Next Hop Resolution Protocol request message by an intermediate device comprises receiving a first Next Hop Resolution Protocol request message from a previous hop device on the forward path; allocating a return path label for a label switched path segment from a next hop device on the forward path to an intermediate device; and, sending a second Next Hop Resolution Protocol request message including the return path label and the virtual private network identifier to the next hop device on the forward path (column 5, lines 11-55, column 9, lines 11-39).

32. As per claims 19 and 36, Daruwalla teaches a device for supporting virtual private networks in a label switched communication system, the device comprising:

label switching logic operably coupled to establish a label switched path for the virtual private network (column 2, lines 41-48). Daruwalla discloses label information and label mapping information (column 13, lines 31-54).

33. Daruwalla does not disclose using Next Hop Resolution Protocol messages,

wherein the label switching logic includes a label request and a virtual private network identifier in Next Hop Resolution Protocol request messages; and,

wherein the label switching logic includes label mapping information and the virtual private network identifier in Next Hop Resolution Protocol reply messages.

34. Luciani teaches using NHRP messages (column 2, lines 28-29),

wherein the label switching logic includes a virtual private network identifier in Next Hop Resolution Protocol request messages (column 2, line 65 to column 3, line 5, i.e. "a Virtual Private Network Identifier in each NHRP control message and in each packet"); and,

wherein the label switching logic includes the virtual private network identifier in Next Hop Resolution Protocol reply messages (column 2, line 65 to column 3, line 5, column 5, lines 26-55, i.e. "a Virtual Private Network Identifier in each NHRP control message and in each packet"). Both Luciani and Daruwalla deal with multi protocol protocols, that allow communication devices on different subnetworks to communicate without requiring routing at the internetwork protocol layer of the protocol stack.

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multi protocol label switching protocol in the system of Luciani,

since Daruwalla states at column 2, lines 41-48 that multi protocol label switching is a standard manner of implementing VPN services in an IP network. By implementing multi protocol label switching in the system of Luciani such a modification would allow routing provisions for a VPN service to be implemented in an IP network.

36. Concerning claims 20 and 37, Luciani teaches transmitting logic operably coupled to transmit to a next hop device in the communication network a Next Hop Resolution Protocol request message including a label request and the virtual private network identifier (column 5, line 37-40); and,

receiving logic operably coupled to receive from the next hop device in the communication network a Next Hop Resolution Protocol reply message including a forward path label for a label switched path segment to the next hop device in the communication network and the virtual private network identifier (column 5, lines 46-55).

37. Regarding claims 21 and 38, Daruwalla teaches the label switching logic is operably coupled to establish the label switched path to the next hop device in the communication network using the forward path label (Figure 8, column 14, lines 3-34).

38. With regards to claims 22 and 39, Daruwalla teaches the label switching logic further comprises return path allocation logic operably coupled to allocate a return path label for a label switched path segment from the next hop device in the communication network, and wherein the transmitting logic is operably coupled to transmit to the next hop device in the communication

network the Next Hop Resolution Protocol request message including the return path label in addition to the label request and the virtual private network identifier (Figure 8, column 1, lines 23-45, column 14, lines 3-34).

39. Regarding claims 23 and 40, Luciani teaches the label switching logic comprises request message receiving logic operably coupled to receive from a previous hop device in the communication network a first Next Hop Resolution Protocol request message including a label request and the virtual private network identifier; request message transmitting logic operably coupled to transmit to a next hop device in the communication network a second Next Hop Resolution Protocol request message including the label request and the virtual private network identifier; reply message receiving logic operably coupled to receive from the next hop device in the communication network a first Next Hop Resolution Protocol reply message including label mapping information and the virtual private network identifier; forward path label allocation logic operably coupled to allocate a forward path label for a label switched path segment from the previous hop device in the communication network; and, reply message transmitting logic operably coupled to transmit to the previous hop device in the communication network a second Next Hop Resolution Protocol reply message including the forward path label and the virtual private network identifier (column 5, lines 11-55, column 9, lines 11-39).

40. Concerning claims 24 and 41, Daruwalla teaches the request message receiving logic is operably coupled to maintain previous hop state information for the previous hop device in the communication network, and wherein the reply message transmitting logic is operably coupled

to transmit the second Next Hop Resolution Protocol reply message to the previous hop device in the communication network based upon the previous hop state information (column 14, lines 11-67).

41. Regarding claims 25 and 42, Daruwalla teaches the first Next Hop Resolution Protocol request message includes a forward path address list, and wherein the label switching logic is operably coupled to insert a device address into the forward path address list and include the forward path address list in the second Next Hop Resolution Protocol request message (Figure 8, column 14, lines 3-34).

42. Regarding claims 27 and 44, Luciani teaches the first Next Hop Resolution Protocol reply message includes a return path address list including at least an address for the previous hop device in the communication network, and wherein the reply message transmitting logic is operably coupled to transmit the second Next Hop Resolution Protocol reply message to the previous hop device in the communication network based upon address in the list of addresses (column 5, lines 11-55, column 9, lines 11-39).

43. Concerning claims 28 and 45, Luciani teaches the reply message transmitting logic is operably coupled to remove an address from the return path address list to form a modified return path address list and to include the modified return path address list in the second Next Hop Resolution Protocol reply message (column 5, lines 11-55, column 9, lines 11-39).

44. Concerning claims 29 and 46, Daruwalla teaches the first Next Hop Resolution Protocol request message includes a return path label for a label switched path segment to the previous hop device, and wherein the label switching logic is operably coupled to establish a label switched path to the previous hop device using the return path label (Figure 8, column 1, lines 23-45, column 14, lines 3-34).

45. Concerning claims 30 and 47, Daruwalla teaches the label switching logic further comprises return path allocation logic operably coupled to allocate a return path label for a label switched path segment from the next hop device in the communication network, and wherein the request message transmitting logic is operably coupled to transmit to the next hop device in the communication network the second Next Hop Resolution Protocol request message including the return path label in addition to the label request and the virtual private network indicator (Figure 8, column 1, lines 23-45, column 14, lines 3-34).

46. Regarding claims 31 and 48, Luciani teaches the label switching logic comprises:

receiving logic operably coupled to receive from a previous hop device in the communication network a Next Hop Resolution Protocol request message including a label request and the virtual private network identifier; forward path label allocation logic operably coupled to allocate a forward path label for a label switched path segment from the previous hop device in the communication network; and, transmitting logic operably coupled to transmit to the previous hop device in the communication network a Next Hop Resolution Protocol reply

message including the forward path label and the virtual private network identifier (column 5, lines 11-55, column 9, lines 11-39).

47. With regards to claims 32 and 49, Luciani teaches the Next Hop Resolution Protocol request message includes a forward path address list, and wherein the transmitting logic is operably coupled to include the forward path address list as a return path address list in the Next Hop Resolution Protocol reply message (column 5, lines 11-55, column 9, lines 11-39).

48. Regarding claims 33 and 50, Luciani teaches the Next Hop Resolution Protocol request message includes a return path label for a label switched path segment to the previous hop device in the communication network, and wherein the label switching logic is operably coupled to establish the label switched path to the previous hope device in the communication network using the return path label (column 5, lines 11-55, column 9, lines 11-39).

49. Regarding claims 34 and 51, Luciani teaches the Next Hop Resolution Protocol request messages comprise Next Hop Resolution Protocol Resolution Request messages (column 5, lines 11-55).

50. Regarding claims 35 and 52, Luciani teaches the Next Hop Resolution Protocol reply messages comprise one of:

Next Hop Resolution Protocol Resolution Reply messages (column 5, lines 11-55); and,

Next Hop Resolution Protocol Label Mapping messages (column 5, lines 11-55).

51. Regarding claim 55, Daruwalla teaches wherein the ingress device further includes return path label mapping information in the Next Hop Resolution Protocol request message, and wherein each intermediate device on the forward path further includes return path label mapping information in the Next Hop Resolution Protocol request message (Figure 8, column 1, lines 23-45, column 14, lines 3-34).

52. As per claim 56, Luciani teaches a protocol message comprising:

a virtual private network identifier identifying a virtual private network for the protocol message (column 2, line 65 to column 3, line 5, i.e. a VPN identifier in each NHRP control message and in each packet).

53. Luciani teaches using NHRP to establish a physical or logical (dynamic) path over a multi protocol over ATM network.

54. Luciani does not disclose using NHRP in a label switched network, wherein the NHRP messages include label information.

55. Daruwalla label information relating to a label switched path associated with the virtual private network (column 7, line 56 to column 8, line 43, column 13, lines 31-54, column 14, lines 35-67). Both Luciani and Daruwalla deal with multi protocol protocols, that allow communication devices on different subnetworks to communicate without requiring routing at the internetwork protocol layer of the protocol stack.

56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the multi protocol label switching protocol in the system of Luciani,

since Daruwalla states at column 2, lines 41-48 that multi protocol label switching is a standard manner of implementing VPN services in an IP network. By implementing multi protocol label switching in the system of Luciani such a modification would allow routing provisions for a VPN service to be implemented in an IP network.

57. Regarding claim 57, Luciani teaches that it is embodied as a next hop resolution protocol message (column 2, line 65 to column 3, line 5, i.e. a VPN identifier in each NHRP control message and in each packet).

58. With regards to claim 58, Daruwalla teaches wherein the label information comprises label request information (column 8, lines 9-43).

59. As per claim 59, Luciani teaches wherein the label information comprises label mapping information (column 12, lines 29-46, i.e. mapping each of the plurality of tags to a corresponding VPN identifier).

60. As per claim 60, Daruwalla and Luciani both teach in their Abstracts that both their respective inventions are embodied in a carrier wave for transmission over a communication network as both teach the protocol being implemented over a network of some sort.

Conclusion

61. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

62. The following patents are cited to further show the state of the art with respect to managing virtual private networks using next hop resolution protocol, such as:

United States Patent Application Publication No. 2004/0095947 to Luciani et al., which is cited to show supporting virtual private networks using next hop resolution protocol.

63. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (571) 272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.

64. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

65. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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clf